ET Docket # 95-19

April 27, 1995

Mr. John Reed
Federal Communications Commission
1919 M Street, NW
Washington, DC 20554

Dear Mr. Reed:

The following are my comments and discussions concerning Federal Communications Commission, 47 CFR Parts 2 and 15, ET Docket No. 95-19, "Streamlining the Equipment Authorization Procedures for Digital Devices."

COMPETITIVE EDGE ADVANTAGE

This NPRM implies that under the current FCC requirements manufacturers may suffer a competitive disadvantage because it may take up to 35 days to obtain their grants of certifications. Assuming that all manufacturers have this same restraint, the competitive disadvantage would seen to be solely with companies getting their products to market without going through the "FCC process", or, the unlawful manufacturers. It appears that this proposed deregulation effort may actually have the potential of encouraging honest manufacturers into becoming unscrupulous in order to compete with the less scrupulous manufacturers. The incentive seems to be heading in the wrong direction, for regulatory compliance purposes anyway.

NAVLAP ACCREDITATION

I feel that the FCC's requirement that all testing laboratories become members of NAVLAP is unwarranted. The FCC's own internal study of NAVLAP versus non-NAVLAP laboratories, conducted several years ago, did not indicate that NAVLAP member laboratories performed better than the non-NAVLAP laboratories. As I understand it, several NAVLAP member laboratories were included in the study's "top ten worst performers" list. Statistically, with only 20 out of 500 laboratories being NAVLAP members, I don't believe that any NAVLAP member laboratory should have even appeared on the list, if the NAVLAP program was, or is, all that necessary.

With approximately 500 laboratories currently on record with the FCC, and only about 20 laboratories currently NAVLAP members, the initial cost for NAVLAP membership ultimately placed on the manufacturers will be approximately $4.8 million, this $4.8 million going to yet another U.S. Government Agency, the Department of Commerce.

The NAVLAP fee structure seems to be rather complex and extensive. NAVLAP charges the following fees for membership:

1. Initial Application Fee,
2. Administration and Technical Fee(s),
3. On-Site Assessment Fee(s),
4. Proficiency Testing Fee(s), and
5. Test Method Fee(s).

I believe that requiring NAVLAP membership will only add unnecessary additional costs associated with performing FCC testing. I also believe that the existing requirements listed in Part 2 of the FCC Rules are still sufficient for demonstrating competency -- adherence to ANSI C63.4-1991, and with the requirements for laboratories to submit their site attenuation measurement data along with their site description information to the FCC.

COMPONENT SYSTEM TESTING VERSUS NO TESTING

Technically speaking, I believe that testing individual components for compliance will be extremely difficult to ensure that a "system" comprised of these components will comply, or even almost comply, with the FCC standards. Most digital devices will not normally be operated as "stand alone devices." Compliant test systems, even under the current rules, can fail to meet the FCC emission limits by simply exchanging, as an example, its "certified" monitor with another monitor previously certified in another test system. Computer system configurations - chassis designs, power supply selections, and input/output port configurations - introduce many variables that cannot be calculated or even technically defined. It is well known, in the EMC community, that a system's total emissions can be greater than the sum of its individual component emissions.

There may be ways of testing subassemblies, or component systems, but **very specific clarifications and test conditions** would have to be defined. I believe that the complexity of such methods would be more labor intensive and be subject to more interpretation errors than with the present FCC requirements. As an example, testing a "mother board" without an enclosure could be tested but different radiated and conducted emission limits would probably have to be specified. Specific details would also have to be addressed for each test system configuration, such as, how to attach power supplies, and how to handle their input/output ports, etc.

Modular testing may be possible for large manufacturers that have complete control of their products, power supplies, chassis, mother boards, etc., but this would probably be impossibly for "system integrator's" to effectively comply with. Many of these types of manufacturers have no knowledge or control in the manufacturing of the products they purchase and assemble. They many not know, as an example, if the original manufacture has changed the design of a power supply they have been previously purchasing. It has been estimated that system integrator's represent as much as 57% of the computer/peripheral devices sold within the U.S. This is a very large number of computer products that probably couldn't be regulated or enforced efficiently under the provisions of this NPRM.

As for demonstrating compliance without requiring any testing, I believe that adopting such a scheme would essentially result in the FCC discarding their digital device rules entirely.

EU HARMONIZATION RELATED TOPICS

If the EU type regulatory compliance system is one that we want to incorporate we should go further than is proposed under this NPRN. Like the EU, our deregulation plan should strongly encourage the use of American test laboratories for compliance testing. This can be done using the same methods as the EU currently uses. As an example, under the EU laws all transmitters (intentional radiators) **must be tested and authorized** by an EU "Competent Body." Another EU incentive to use only EU accredited organizations is through their own standards, themselves. A manufacturer may only "self-test for compliance" if their product can be tested to a "harmonized standard." This means that the standard has to be adopted by all member states and they have to be published in the European Journal. Any Standard that is adopted but not published, or any proposed alternative test plan, can only be used by an EU Notified or Competent Body. Since many EU Standards may be continuously upgraded, or modified, they have the potential of continuously falling into "adopted but not harmonized" or "alternative test plan" categories.

Another incentive to use only EU laboratories is done through their own internal interpretations of their Rules. As an example, consumer electronics equipment (radios, VCR's, and televisions) have a product standard for radiated emissions. A "product standard" is applicable to a specific product type. This standard only requires testing radiated emissions to 300 MHz. However, should the EU find a **consumer electronics product** that radiates emissions above 300 MHz in excess of the limit requirements defined in the product standard for **ITE equipment** (not consumer products), the EU will find that product in violation of their Directives. This rule "interpretation" is not documented or specified in any EU Directive or Standard, this interpretation was agreed upon be a group of Notified Bodies within the EU. So, if you are not a

Notified or Competent Body you may not know what rules, or standards, are applicable for demonstrating compliance.

Several EU compliance experts, during a recent EU Directive workshop, also brought up another reason why U.S. manufacturers "may prefer" not to self-test for compliance. Under **EU law**, every member State has to accept a "technical file" prepared by a Notified or Competent Body. However, any individual member State can, and some probably will, challenge a technical file prepared by anyone other than an EU authorized organization. Unlike the FCC's proposed minimum requirements, a "technical file" must be prepared for every product being sold within the EU, the simple DoC form is not the only requirement for products entering the EU. Even if the technical file is prepared correctly and the measurements performed in accordance with the applicable Standards these "legal delays" can cause manufacturers valuable time and money in getting their products to market. The EU's DoC method, allowed under the EU Directives, has some serious inherent "time and money" risks for non-EU manufacturers desiring to self-test their products.

As explained above, I believe that careful examinations should be done on the exact process', and their intents, the EU is implementing for DoC before we decide to adopt a similar type system. Adopting only a small portion of their system (DoC) may prove to be detrimental to U.S. manufacturers, U.S. consumers, as well as to our own established U.S. testing industry.

The U.S. Department of Commerce (DOC) is currently negotiating with the EU in an attempt of establishing semi-Competent Body status for a group, also within DOC, called CASE. CASE would then have the authority to accredit NVLAP, also part of DOC, as a semi-equivalent Notified Body. In turn, NAVLAP would then have the authority to accredit U.S. testing laboratories allowing them to conduct EU testing as semi-accredited laboratories. At best, DOC is asking the EU to allow us, the U.S.A., to essentially become an associate member of their European Union. I would like to remind our Department of Commerce that the U.S. currently has more States than the EU, and that we are still the worlds largest market place for their products.

The Pacific-Rim countries are apparently attempting to form their own equivalency to the EU. They too have realized that Safety and EMC regulatory requirements can be used as an effective and efficient legal trade barrier. Instead of capitulating to the EU's, and later to the Pacific-Rim countries, economic and political pressures, maybe we should create our own "American Union." Again, we have more States than they have, and again, we will still be the largest single market for their products.

ENFORCEMENT

This NPRN presupposes that the regulatory requirements employed by the European Union (EU) is one that should be emulated. I would like to point out that "self declaration" type plans have not been proven to be efficient or effective in Europe, or anywhere else, to date.

There is another point I would like to bring to your attention concerning emulating the EU Directives. In the European Union, each Member State (country) is responsible for enforcing the EU Directives, not the "EU" itself. This is due largely to the expenses and manpower burdens associated with enforcement. In this NRPM the total responsibility for enforcement remains solely with the FCC. To accurately emulate the EU system, and to be effective, some provisions should probably be included allowing individual U.S. States enforcement powers. I doubt that the FCC will have the funds or personnel necessary for the levels of effort required to adequately enforce their rules under this proposed "DoC" plan. I feel that without adequate enforcement, "rules" are generally not complied with.

Under the FCC's proposed DoC plan, each product must contain a name, phone number, etc., of a responsible party within the U.S. This may not be adequate, for several reasons. Most interference problems and complaints will be from individuals receiving interference from these devices/products, not from these devices receiving interference. **Computer systems generally cause interference, they usually do not suffer from interference.** The people being interfered with, TV viewers, public safety receivers, etc., may not have the telephone numbers and addresses to complain to, they may not own the computer system that causes their interference problems. In these cases the effectiveness of this DoC plan becomes somewhat diminished.

One major enforcement problem, even currently, is with reporting interference complaints. Most U.S. consumers do not know the causes of interference, and they probably have no ideas on how or where to report their complaints. One reason for the FCC not receiving many computer related interference complaints is probably due to U.S. consumers calling their local TV cable companies, power companies, or telephone companies, with their complaints.

If a DoC plan is to be adopted, a requirement to include an FCC 1-800 interference hot-line number with instructions on how to report interference complaints should be required for all "DoC" products. This approach might not be a bad idea for all devices regulated by the FCC -- if you don't know who to call, you can't call them. This might make the FCC's interference complaint statistics more accurate.

As an example, with the newly enacted reorganization of the FCC which person/office would a U.S. consumer call to report an interference complaint? As I understand the new FCC reorganization, the Field Operations Bureau (FOB) is now the Compliance and Information Bureau (CIB). In addition, many of the CIB offices are now being closed. Under this reorganization, I wonder if CIB will have adequate resources for investigating consumer complaints and/or tracking down interference sources.

Another major concern I have is about how the FCC would enforce the Rules if a "component test procedure" was used to originally determine compliance with the FCC Rules. Should the FCC perform a "sample test" on a computer, how would the FCC determine if that product is compliant or non-compliant? As an example, for a computer that contains a motherboard that was originally tested as a "stand-alone-motherboard", would the FCC test it by removing the mother board, or test it as a standard computer system, as currently defined? Where or whom would be responsible for compliance, the original manufacturer (that claimed compliance) or the system integrator? As explained earlier, any product tested in a different test configuration than was used originally could easily result in that product failing to meet the FCC limits. Without a defined base reference, duplicating test results would probably be impossible.

The proposed requirements in this NPRM, do not appear to include reasonable or adequate mechanisms to allow the FCC to enforce their Rules. By eliminating the up-front regulatory requirements, as currently required (pre-enforcement); by not requiring the manufactures to even "notify" the FCC of their products; and with the average consumer not being adequately educated in reporting interference problems; there seems to be a potential problem with the FCC actually fulfilling their regulatory responsibilities. It would be extremely difficult for the FCC to "sample test" products without knowing what products are being sold in the marketplace. I doubt that the FCC will have the funds or manpower needed to go into the marketplace and randomly find and purchase computer products to perform the proposed "sample testing" on. I feel, generally, that if a Rule is unenforceable it probably will not be complied with, again, for competitive reasons.

Before adopting these new rules, I believe the FCC should use a rule-of-thumb commonly used in the private sector. Prior to adopting any business plan, private sector companies have to show that they have the personnel and financial resources needed to efficiently perform the work. Even a good business plan without adequate resources will generally fail.

POSSIBLE FUTURE RELATED RAMIFICATIONS

As per the stated intent of this NPRM, competitive edge, and reduced manufacturing costs, wouldn't the same argument hold true for all manufacturers of products that currently require equipment authorizations from the FCC? These other manufacturers of FCC regulated devices might think that they too should be allowed the same benefits as allowed under this deregulation effort. Logically speaking, there are probably more computers and peripherals currently in use, at any one time, than CB radios, radio controlled toys, etc., combined.

SUMMARY

In summary, I would like to point out that digital devices became an interference problem requiring FCC regulations in the early 1980's, and there were only hundreds of thousands being used. We now have, literally, hundreds of millions of computers, peripherals, and other digital systems being used. I am concerned that these devices will interfere with current commercial, private, and Military communications systems, as well as potentially interfering with the newly emerging IVDS and PCS technologies. This is a real concern, I believe, because computers and their related systems are increasing in number, as well as in their operating frequencies. These devices, unless compliant, have a great potential to emit clock harmonics with enough amplitude to cause interfere to PCS, IVDS, and other communications systems.

It is my opinion that, as presented, it would be extremely difficult, and probably very impractical, for the FCC to efficiently enforce their Rules under the deregulation plan described in this NPRM. Under these conditions, unscrupulous manufacturers could, and probably would, circumvent the DoC system and thus illegally and successfully sell their products.

I advocate that any further deregulation plan include (at least) the following additional safeguards:

1. Place a mechanism in the process that would educate and assist U.S. consumers in how and where to report interference, or non-compliant product information complaints, to the FCC;

2. incorporate provisions allowing individual U.S. States enforcement powers;

3. establish formal guidelines and official procedures for requesting "TEST SAMPLES" for the random product sampling effort being proposed;

4. establish formal testing procedures for all **adopted** permissible test configurations, including alternative methods; and

5. require manufacturers to "Notify" the FCC, under the existing Notification Rules, of the products they are going to sell within the U.S.

With the FCC's deregulation goals, and with the EU's increased regulatory efforts, I believe we, the U.S., have the potential of being a repository for products that wouldn't be accepted into the EU. The only viable solution to the FCC's harmonization goal with the EU would appear to be complete reciprocity between the U.S. and the EU. In other words, we should require the same technical requirements as the EU requires; similar testing eligibility requirements (laboratory accreditation/memberships) as they require; and we should incorporate an enforcement policy as efficient as theirs. This would allow a "leveler playing field" for U.S. manufacturers, U.S. consumers, and U.S. testing firms.

Sincerely,

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